

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002931**Date Inspected:** 31-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Fabrication**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) Fabrication:

No closed rib Production Monitoring Tests Macro Etch specimens were presented to the QA Inspector for inspections this shift.

CWI: Mr. Zhang Bao Lei, Mr. Sun Wei

Bay 1

QA Inspector observed ZPMC welder Mr. Sing Yunshu stencil 59421 is using welding procedure specification WPS-B-T-2133 make flux cored fillet welds on closed rib diaphragm plate weld DP551-001-213. The QA Inspector observed a welding current of approximately 220 amps and 26.5 volts. Items observed by the QA Inspector appear to comply with project specifications.

QA Inspector observed ZPMC welder Mr. Zhao Chengshuang stencil 59400 is using welding procedure specification WPS-B-T-2133 make flux cored fillet welds on closed rib diaphragm plate weld DP551-001-269.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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The QA Inspector observed a welding current of approximately 225 amps and 26.0 volts. Items observed by the QA Inspector appear to comply with project specifications.

### Bay 3

The QA Inspector observed three ZPMC welders using welding procedure specification WPS-B-T-2132-3 using the flux cored welding process for fillet welds on six OBG side plate SP414-001 stiffener welds at the same time. ZPMC has multiple flux cored welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. The QA Inspector observed a welding travel speed of approximately 445 mm per hour. As the welding commences, each of the welders is responsible for two of the flux cored welding heads. All welders are using 1.4 mm diameter E71T-1 rolls of electrodes that have been marked as being installed earlier today. Welder Mr. Li Shuliang stencil 48801 completed weld SP414-01-001 with a welding current of approximately 297 amps and 30.5 volts and weld SP414-01-002 with a welding current of approximately 295 amps and 30.3 volts. Welder Mr. Lio Zihong stencil 62447 completed weld SP414-01-005 with a welding current of approximately 295 amps and 30.3 volts and weld SP414-01-006 with a welding current of approximately 295 amps and 30.6 volts. Welder Mr. Sun Tiyu stencil 53359 completed weld SP414-01-009 with a welding current of approximately 300 amps and 30.8 volts and weld SP414-01-010 with a welding current of approximately 295 amps and 30.5 volts. Items observed by the QA Inspector appear to comply with project specifications.

### Heavy Production Bay 3

The QA Inspector performed random magnetic particle inspections of deck plate DP-040-001 weld #1 repair areas. This deck plate has been visually accepted by QA Inspector Mr. Roscoe Dixon. The areas that were inspected had previously been marked with these "Y" dimensions: 1850mm, 2200mm, 4900mm, 6070mm, 9075mm, 9650mm, 10890mm, and 14880mm. In addition, both weld terminations were MT inspected. All areas inspected appear to comply with project specifications. See the TL6028 "MT Test Report" for additional information.

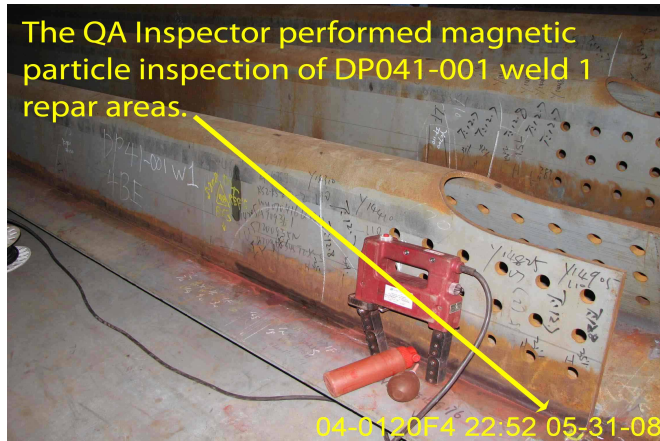
The QA Inspector performed random magnetic particle inspections of deck plate DP-041-001 weld #1 repair areas. This deck plate has been visually accepted by QA Inspector Mr. Roscoe Dixon. The areas that were inspected had previously been marked with these "Y" dimensions: 1980mm, 3650mm, 5470mm, 8915mm, 11378mm, 12415mm, and 14870mm. In addition, both weld terminations were MT inspected. All areas inspected appear to comply with project specifications. See the photograph below and the TL6028 "MT Test Report" for additional information.

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## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry (858) 344-2712, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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